

**PATENT ABSTRACTS OF JAPAN**(11)Publication number : **2000-218411**(43)Date of publication of application : **08.08.2000**

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**B23B 27/14**(21)Application number : **11-022789**(71)Applicant : **KYOCERA CORP**(22)Date of filing : **29.01.1999**(72)Inventor : **NODA KENJI****(54) CUBIC BORON NITRIDE SINTERED BODY CUTTING TOOL**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a high-performance cubic boron nitride sintered compact, wherein while mechanical and thermal characteristics are maintained, the falling- off of cBN particles, the wear of a binder, and the wear and damage of a tool caused by the particle falling-off are preventing during the cutting of highly hardened steel or cast iron.

**SOLUTION:** This cutting tool contains 30 to 90 vol.% of fine-particle cubic born nitride having an average particle size of 1  $\mu$ m or lower and 10 to 70 vol.% of coarse-particle boron nitride having an average particle size of 2 to 10  $\mu$ m, and the average particle size of the binder of a remaining portion is set at fine-particle cubic born nitride < binder < coarse-particle cubic boron nitride. The binder is made of at least one selected from carbide, nitride, carbon nitride, boron, a compound of these, AlN, Al<sub>2</sub>O<sub>3</sub>, and iron group metal containing at least one element of 4a, 5a and 6a group of the periodic table, performance having both wear resistance and damage resistance is provided.

**LEGAL STATUS**

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